

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 10, 2011 has been entered.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with James Ledbetter, registration 28732 on May, 4, 2011.

Replace claim 2 with the following:

“2. The multicarrier communication apparatus according to claim 1, wherein:

the superimposing section comprises an acquisition section that acquires the same transmission symbols, a first number of the same transmission symbols being equal to a second number of the plurality of subcarriers of a corresponding subcarrier group; and

the superimposing section superimposes the acquired same transmission symbols with the plurality of subcarriers of the corresponding subcarrier group.”

Allowable Subject Matter

3. Claims 1-4 and 10 are allowed.
4. The following is an examiner's statement of reasons for allowance:

The amended independent claims (claims 1 and 10) of the instant application are directed to an invention of controlling the transmission power of the subcarrier groups in a multicarrier communication system. Each subcarrier group contains a plurality of subcarriers and a combined transmission power is allocated for each subcarrier group. A control section adjusts the transmission power of each subcarrier of all the subcarrier groups such that each subcarrier group has the same combined transmission power. At a remoter station, a difference between the combined received power of each subcarrier group and a desired target receiving power is calculated. Then the amount of power adjustment is obtained by dividing the difference by the number of subcarriers in the subcarrier group.

The available prior art of record by Kwon et al (US 6,151,328) describes an apparatus for controlling power in a CDMA system which has a plurality of subcarriers. A comparator detects a difference between estimated receiving signal power and a threshold, a power up/down command generator generates power up/down commands in response to the comparison result

Art Unit: 2611

from the comparator, and the up/down commands are sent to a transmitter through an antenna.

Kwon describes the transmitter receives the up/down commands and controls the power of K antennas. Each antenna corresponds to a plurality of subcarriers. Another reference by Orihashi et al (2002/0181439 A1) describes controlling combined power of each subcarrier group.

However, Kwon and Orihashi failed to disclose adjusting the transmission power of each subcarrier of all the subcarrier groups such that each subcarrier group has the same combined transmission power. Kwon and Orihashi also do not disclose a difference between the combined received power of each subcarrier group and a desired target receiving power is calculated and the amount of power adjustment is obtained by dividing the difference by the number of subcarriers in the subcarrier group.

The above distinct features in independent claims 1 and 10 render them allowable.

Claims 2-4 are depending on claim 1. Therefore claims 1-4 and 10 are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LIHONG YU whose telephone number is (571)270-5147. The examiner can normally be reached on 8:30 am-7:00 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on (571) 272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lihong Yu/
Examiner, Art Unit 2611
/Shuwang Liu/
Supervisory Patent Examiner, Art Unit 2611